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### The Financing of the Public Sector in Postwar Japan

Hugh T. Patrick

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ECONOMIC GROWTH CENTER

YALE UNIVERSITY

Box 1987, Yale Station  
New Haven, Connecticut

CENTER DISCUSSION PAPER NO. 7

THE FINANCING OF THE PUBLIC SECTOR IN POSTWAR JAPAN

Hugh T. Patrick

June 1, 1966

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Resource allocation at the macro level is a major concern of government fiscal policy in Japan as in other nations. Three inter-related types of resource allocation problems may be distinguished. One is to ensure that labor and capital resources are fully used -- the compensatory finance problem of balancing aggregate demand with full capacity supply consonant with price level stability objectives. While primarily a business cycle problem it also has implications for growth.

A second problem is to determine and provide for the proper allocation of resources between the public sector and the private sector. Essentially it involves the trade-off between the provision of public goods and of private goods. Related to this, third, is the problem of the allocation of resources between consumption and investment. This is essentially the issue of the optimum rate of growth. The government influences not only private consumption, saving, and investment but of course determines the rate of public consumption, saving, and investment. The government has a variety of instruments to implement its policies -- taxation, expenditures (on goods and services, and on transfer payments), and borrowing and lending.

The purpose of this paper is to focus on the somewhat more narrow problem of financing of the government sector in postwar Japan, rather than directly examining these broad issues. Nonetheless, the analysis is predicated upon this broader policy framework, and will tackle various facets of the broader problems, albeit from occasionally indirect approaches. The main emphasis is on net relationships-- government investment and its financing -- with little discussion of government transfer payments or current purchases of goods and services.

I first present and discuss the data on public sector investment and its financing. Following a brief excursion into intra-governmental financing, I turn to certain contemporary policy issues emanating from the government's investment program and its financing. Throughout I use the Japanese national income definition of the government sector, which includes central and local (prefectural and municipal) governments and, at each level, general government and government enterprise. "Government" is thus synonymous with "public sector," though in terms of policy making it refers mainly to the central level. Less use is made of the Ministry of Finance legal and budgetary classification of general account, special accounts, and government corporations, since they involve considerable overlapping and duplication on a non-consolidated basis. The new national income estimates are used wherever possible.<sup>1</sup> Data are in current prices, unless otherwise noted.

## I

As indicated in Table 1, government investment has grown rapidly in the postwar period (increasing almost seven-fold between 1952-1964, and 4-1/2 times in real terms), with some cyclical and erratic fluctuation. Moreover, the investment share in the government's total purchase of goods and services has risen dramatically from the 1952 level of 39 percent to the present level of approximately 53 per cent. Because GNP and gross domestic investment has also grown rapidly and with cyclical swings, the share of government investment in them has been rather more stable. Since 1957, however, the trend of the government investment/GNP ratio has been strikingly upwards, rising from 6.7 percent to 10 per cent. (The 1965 ratio will be considerably higher).

1. As published in Bank of Japan, Economic Statistics Monthly, March 1966.

Table 1. Government Gross Investment and Saving  
(current prices, amounts in billion yen)

I N V E S T M E N T (I)						S A V I N G (S)					
Calendar Year	Amount	Annual Rate Increase	% Govt. Purchase Goods & Services	% GNP	% Gross Invest.	Amount	Annual Rate Increase	% Govt. Revenues	% GNP	% Gross Saving	I-S
1952	398.8	--	38.8	6.6	25.0	523.1	--	40.1	8.6	32.7	-124.3
1953	525.2	31.7	41.3	7.5	32.4	479.1	- 8.4	33.3	6.9	29.5	46.1
1954	595.2	13.3	41.7	7.6	31.6	455.8	4.9	29.0	5.8	24.2	139.4
1955	747.9	25.7	45.7	8.8	34.0	464.8	2.0	28.2	5.5	21.2	283.1
1956	666.7	-10.9	42.1	7.0	24.7	619.9	33.4	34.0	6.5	23.0	46.8
1957	742.3	11.3	42.6	6.7	20.6	849.3	37.0	39.4	7.7	23.6	-107.0
1958	891.2	20.1	44.4	7.9	27.3	708.9	-16.5	31.3	6.3	21.7	182.3
1959	1,080.2	21.2	47.7	8.4	26.6	901.0	27.1	35.8	7.0	22.2	179.2
1960	1,294.4	19.8	49.4	8.5	24.1	1,303.8	44.7	41.6	8.6	24.3	- 9.4
1961	1,532.0	18.4	49.7	8.3	21.1	1,796.5	37.8	45.8	9.7	24.8	-264.5
1962	2,085.4	36.1	53.7	10.0	27.4	1,977.8	10.1	44.3	9.5	26.0	107.6
1963	2,353.2	12.8	52.3	10.0	28.6	2,163.7	9.4	41.9	9.2	26.3	189.5
1964	2,692.5	14.4	52.8	9.7	26.0	2,108.1	- 3.6	37.1	7.6	20.4	584.4

Source: New national income statistics, Bank of Japan, Economic Statistics Monthly, March 1966. Savings are adjusted to include (old) estimates of central government capital consumption allowances plus local government capital consumption allowances estimated from Ministry of Home Affairs worksheets; the 1964 estimate is preliminary.

For the postwar period as a whole private aggregate demand, based on booming private fixed investment demand, has been sufficiently strong that the government has not needed to use compensatory fiscal policy to generate demand through deficit spending. Consequently, public sector demand for resources has been competitive with private demand. The exceptions has been the recession periods of 1954, 1957-58, 1962, and 1965, but these represent deliberate restrictions of aggregate demand to restore balance of payments equilibrium.

The government reaction to the public-private competition in the use of resources at full capacity levels and rates of growth of output has been, at least until 1963, to favor the private sector, notably business fixed investment. Government total purchases of goods and services as a proportion of GNP (17-19 per cent) did not display any rising trend, unlike many other industrial nations. The government also encouraged by fiscal and financial means the relative shift within the private sector from personal consumption to business investment, in order to promote growth.

While holding the growth of its expenditures to the rate of growth of aggregate demand, the government contributed to the growth process not only by shifting relatively from government consumption to government investment, but also by allocating its investment mainly to areas complementary to private production of consumer goods and services -- such as roads, urban water and sewage systems, and housing -- the government until recently did not increase its relative allocation of investment to these areas. In other words, in order to support economic growth by means increases in private business invest-

ment, industrial capacity and output, the government restrained the production of public consumption goods and of housing relative to demand more than any restriction of private production of consumer goods and services.

A further implication of strong private aggregate demand was that the government had to finance its investment by the least demand-creating method. Governments can pay for their gross investment (and other expenditures) by fiscal means through internal financing (gross saving) or by financial means through external borrowing from households, private financial institutions, the central bank, or from abroad. Government saving out of tax and non-tax revenues is the least demand-creating method, followed in order by borrowing from individuals, from financial institutions, and from the central bank.<sup>1</sup> In Japan the domestic demand effect of government foreign borrowing is the same as borrowing from the Bank of Japan, since the government converts the foreign exchange received into yen by selling either the foreign exchange or foreign exchange bills to the central bank.

As is clear from Tables 1 and 2, in Japan the government has relied heavily on its own savings to finance its investment (I)<sup>2</sup>. In the early post-war years government saving was greater than investment; inflation came not from government expenditures but from the central bank-financed lending of government financial institutions. Thereafter government investment has grown

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1. If we assume that any increase in aggregate demand from the financing of government investment in a full resource employment economy tends to increase private demand relative to public and to increase total consumption relative to investment, then this same sequence applies to these allocations as well.

2. Government saving consists of the surplus on current account (tax and non-tax revenues including government enterprise profits less current purchases of goods and services, subsidies, and transfer payments) and capital consumption allowances of government enterprise.

Table 2

Government Investment-Savings Gap  
(current prices, amounts in billion yen)

Calendar Year	National Income Estimate		Flow of Funds Estimate <sup>a</sup>		Discrepancy	
	I-S	$\frac{I-S}{I}$	I-S	Amount	% of I	
1954	139.4	23.4	165.5	- 26.1	- 4.4	
1955	283.1	37.9	183.9	99.2	13.3	
1956	46.8	7.0	- 8.7	55.5	8.3	
1957	-107.0	-14.4	- 98.5	- 8.5	- 1.1	
1958	182.3	20.5	25.0	157.3	17.7	
1959	179.2	16.6	78.4	100.8	9.3	
1960	- 9.4	- .7	-102.5	93.1	7.2	
1961	-264.5	-17.3	-192.5	- 72.0	- 6.7	
1962	107.6	5.2	180.4	- 72.8	- 3.5	
1963	189.5	8.1	288.0	- 98.5	- 4.2	
1964	584.4	21.7	651.2	- 66.8	- 2.5	

Sources: Table 1 and Bank of Japan flow of funds data, adjusted as indicated in notes to Table 3.

a: Net financial surplus or deficit



more rapidly than government saving, with saving lagging increasingly behind investment since 1962. Both saving and investment are highly influenced by the business cycle. Government saving has risen rapidly in boom periods because government revenues increased more than expected and therefore than budgeted current account expenditures. Thus, as indicated in Table 2, the I - S gap disappeared in the late stages of earlier booms, and increased in recession. The 1964 experience is significant in that the I-S gap widened rather than narrowing. Cumulatively, government saving financed 92.0 per cent of government investment between 1952-1964, but declining to 87.6 per cent for 1962-1964, and less if 1965 were included.

An extremely important reason for this high share of internal financing despite rapid growth of investment is that the government's tax system is highly elastic relative to the growth of GNP.<sup>1</sup> This has enabled the government to follow simultaneously several politically attractive courses: regular tax rate reductions, increases in current expenditures, increases in investment, and little obvious increase in borrowing (until 1965). The government's propensity to save out its actual current revenue (G) has been high. A simple least-squares regression using the new national income data for 1954-1964 provides the following results:

$$S = 6.267 + 0.3974G \quad R^2 = .911$$

$$(0.0375) \quad d = 1.060$$

In other words, the marginal propensity to save is almost 40 per cent.

1. It is difficult to obtain precise elasticity estimates, since the government changes tax rates virtually every year. Ishi estimates a weighted average elasticity to national income of direct taxes of 1.58 and indirect taxes of .990; cf. Ishi Hiromitsu, "Sozei Danryokusei no Ichi Keisoku" (A measurement of Tax Elasticity), Hitotsubashi Ronso, Vol. 52, No. 5 (November 1964). In addition income has shifted relatively relative to corporate business, which has a higher tax rate.

Thus, between 1954-1964 only 8 per cent of government investment had to be financed from external sources. In other words, the government relied only to this extent on the net voluntary transfer of claims on resources from outside the public sector. The amount and degree of external financing are measured by the investment-savings gap in the first two columns of Table 2.<sup>1</sup> Two points should be made. First, consolidated at all levels the government has been a net borrower continuously (with cyclical exceptions only) since 1952. Second, the amount of government borrowing has been rising sharply since 1962, culminating in the 1965 decision to sell new issues of government debentures to households and financial institutions. This more recent trend is clearly related to the increased share of government investment in GNP.

One procedure to estimate government reliance on external borrowing is to regress the net issue of government securities (Y) on government investment and service:

$$Y = a_0 + a_1 I + a_2 S.$$

Two estimates were made. The first ( $Y_1$ ) had as the dependent variable net long-term bond issue (mainly local governments and government corporations), while the second ( $Y_2$ ) included in addition short-term government bills. The results were:

$$\begin{aligned} Y_1 &= -50.685 + .0932 I + .02943 S & R^2 &= .927 \\ &(.0494) & (.0535) & d = 2.45 \\ Y_2 &= -8.566 + .6932 I - .7038 S & R^2 &= .834 \\ &(.1746) & (.1894) & d = 2.43 \end{aligned}$$

The coefficients in the first equation are not really significant, especially for S, despite the good fit. The sign for S seems wrong. This, however, may be explained by the tendency for local government and government enterprise

1. The flow of funds data, which provide an alternative estimate of the I-S gap from the net financial deficit of the public sector, underestimate the gap relative to the national income data for earlier years, but overestimate for 1961-1964. It is unclear as to which is the better estimate; fortunately, the divergence appears to be relatively decreasing.

investment, and bond issue to finance it, to grow most rapidly in a boom, when S also is growing rapidly, and to slow down, together with S in the recession.

The second equation looks much better. However, S and I are highly correlated and have virtually the same coefficients; this equation really indicates that government security issue increases by .7 times the increase in the I - S gap. But the implied causal relationship is probably spurious. Most of the change in government security issue is in short-term bills. At the height of the boom the I - S gap narrows (Table 2) because of the officially unanticipated increase in saving. Coincidentally the government loses foreign exchange reserves due to balance of payments problems; it can therefore reduce its foreign exchange bill sales to the Bank of Japan. The opposite happens both to saving and to foreign exchange reserves in the recession.

The external sources of the financing of government investment are estimated from flow of funds data, and appear in Table 3. Of the cumulative total borrowed by the government between 1954-1964, 68.9 per cent came from the private sector, 44.2 per cent from the Bank of Japan (almost all in 1964), and -13.1 per cent from abroad (i.e., the government was a net foreign lender). Within the private sector the government borrowed on a net basis from households and financial institutions, and while lending to corporate business.

Government borrowing from the Bank of Japan is measured by direct transactions.<sup>1</sup> Hence, government borrowing from the private sector which is in

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1. Government foreign exchange holdings and their financing are consolidated to the Bank of Japan sector in order to focus on government borrowing for purposes other than holding foreign exchange.

Table 3

External Sources of Government Finance, 1954-1964  
(billion yen)

	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
From Private Sector (A)	77.5	20.5	59.1	23.3	- 37.1	- 18.9	25.1	31.0	169.5	256.3	199.9
Households											
Receipts from	143.9	140.7	175.2	181.2	176.5	238.3	272.0	294.9	391.1	396.0	467.0
Loans to	59.7	36.6	51.0	66.3	89.8	84.8	90.0	103.2	120.2	114.2	150.9
Net	84.2	104.1	124.2	114.4	86.7	153.5	182.0	191.7	270.9	281.8	316.1
Corporate Business											
Receipts from	2.9	3.9	- 5.1	2.7	16.9	10.8	33.3	53.1	79.8	74.2	73.6
Loans to	102.1	90.3	84.9	122.3	124.0	147.8	166.4	210.5	267.6	285.0	406.8
Net	- 99.2	-86.4	-90.0	-119.6	-107.1	-137.0	-133.1	-157.4	-187.8	-210.8	-333.2
Financial Instit.											
Receipts from	50.9	56.1	68.1	48.2	29.1	50.2	94.3	128.3	144.0	267.8	302.6
Loans to	- 41.6	53.3	43.2	19.7	45.3	85.6	118.1	131.6	57.6	82.5	85.6
Net	92.5	2.8	24.9	28.5	- 16.7	- 35.4	- 23.8	- 3.3	86.4	185.3	217.0
From Bank of Japan (B)	170.7	261.8	-74.4	-146.0	77.1	120.6	-117.6	-220.1	- 19.6	20.2	444.3
From Abroad (C)	- 82.7	-98.4	6.6	24.2	- 15.0	- 23.3	- 10.0	- 3.4	30.5	11.5	7.0
Total (A+B+C)	165.5	183.9	- 8.7	- 98.5	25.0	78.4	-102.5	-192.5	180.4	288.0	651.2

Source: Based on Bank of Japan flow of funds data plus data on local government loans and equity to private business corporations.

Note: The government sector includes central and local government, government enterprises, and government financial institutions, but excludes government holdings of foreign exchange and coin production (both of which are consolidated into the Bank of Japan sector).

effect financed by the central bank credit to the private sector is excluded. (It would be fruitless to include it, since in that case all government domestic borrowing could be regarded as central bank financed). Government direct reliance on central bank credit has been short-term, relatively small, and seasonal or cyclical in nature. The government is legally restricted in its borrowing from the Bank of Japan to short-term bills. Much has been to finance increases in government purchases of domestically produced rice; this seasonal phenomenon results in increased net borrowing on a calendar year basis in years of good rice crops. The government was able to pile up sufficient liquidity during 1960-1962 from the small I-S gaps and increasing net borrowings from the private sector that it could finance its own activities and pay off bills held by the Bank of Japan as they matured. In 1964 it financed the sharply widening I-S gap by increased bill sales to the Bank of Japan.

I was surprised to find that the government has been a net foreign lender rather than borrower. Evidence suggests that the government's net foreign debt has declined from about ¥184 billion (\$501 million) at the end of 1953 to ¥34 billion (\$95 million) at the end of 1964.<sup>1</sup> On a gross basis the central government, a few local governments (Tokyo, Osaka), and government agencies (Japan Development Bank, Nippon Telephone & Telegraph Public Corporation) have borrowed abroad long-term by such means as loans from the World Bank, the U.S. Export-Import Bank, and bond issues. At the same time the central government and its agencies have lent long-term even more abroad, mainly loans by the

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1. The foreign borrowing estimates are the least reliable, though I regard them as reasonably accurate. The Bank of Japan has not made available sectoral foreign asset and liability stock figures since 1959, though some flow data are available. These estimates are derived from adjustments of stocks by flow data. Since the basis of estimation has changed slightly, since gold and foreign exchange are included in foreign borrowings data (though not here), and since the Bank of Japan data are deliberately vague on these matters, some errors may have resulted.

Export-Import Bank of Japan (which increased by ¥416 billion -- \$1,556 million -- between the ends of 1953 and 1964) and subscriptions to such international organizations as the IMF, World Bank, and IDA.

The net flows between government and the private sector summarize and mask somewhat the much larger gross flows, which are extensive and complicated. The government, in addition to its current spending, investing and saving activities, is a large financial intermediary, operating through a variety of government financial institutions. In some items it may be possible to trace government borrowing directly to those units engaging in government investment; examples are debentures sold by central government public corporations to individuals and business corporations using their services and to financial institutions, and local government bond sales to and loans from financial institutions. Most, however, become mingled with other funds and passed through several intermediaries before investment expenditures actually occur.

The most notable example is individual postal savings and post-office annuities and life insurance. These net flows are the largest single and also most routine source of government borrowing. The administrative procedure is to mingle the postal savings with other funds administered by the Trust Fund Bureau. These funds, along with postal annuity and life insurance funds and others, are then used to finance the government's Investment and Loan Program. The Program consists of transfers to local governments and central government enterprise activities by means of loans and bond purchase, and loans to the private sector through government financial institutions and bond purchase.

However, there is a surprisingly close correlation between the net flow of postal savings, annuities and life insurance (P) and net government loans (L) to corporate (and to a lesser extent unincorporated) enterprise.

Using 1954-1964 flow of funds data,

$$L = -64.3 + 1.19 P \quad R^2 = .9106$$
$$(0.0155) \quad d = 1.524$$

This implies that government lending activity depends mainly upon the inflow of postal savings and life insurance. It suggests that Ministry of Finance decision-makers employ, perhaps not explicitly, some such rule of thumb criterion in preparing the Investment and Loan Program. If so, then government financial intermediation is separated from the operation of fiscal policy. We might also note that since government financial institutions lend primarily to big business, in this way saving of small savers is channelled on a preferential basis to large-scale enterprises.

Even on a net basis among the household, corporate business, and financial institution subsectors of the private sector, the government cumulatively between 1954-1964 received 163.2 per cent of its total net borrowings (including the Bank of Japan) from households, made loans equivalent to 142.0 per cent of its borrowings to the corporate sector, and received 47.7 per cent of its borrowings from financial institutions. In other words, the government borrowed considerably more for purposes of relending than for financing its own investment. On a gross basis the central government sold virtually none of its bills or bonds to the private sector; it was legally restricted in its bond issue, and kept its bill rate uncompetitively low since it could rely upon their purchase by the Bank of Japan. The most important

flows between private and government sectors have been postal savings and life insurance, public corporation and local government bond issues, government loans to business, and purchase of bank bonds.

Analysis of the effects of government financial intermediation on the amount of private saving and on the composition of the total allocation of investment funds is beyond the scope of this paper. We may note that the net increase between 1954-1964 in government loans to corporate enterprise and households was only 11.7 per cent of the loan increase by private financial institutions. Government loans have been concentrated, however, to relatively few industries; for example, the electric power industry received 35 per cent of its loans from the Japan Development Bank, and the shipping industry (perhaps the only unprofitable industry in postwar Japan) some 57 per cent.

## II

Thus far I have treated the government as a single homogeneous unit. In terms of the locus of decision-making on tax, expenditure, and financial policies this is reasonable, since the central government strongly influences if not actually determining local government policies as well as those of central government enterprises. Much of the power on these matters is concentrated in the Ministry of Finance.

An important reason for such concentration of power at the central level is the imbalance between expenditures and internal sources of financing of local governments and government enterprises. While in aggregate the public sector may finance most of its investment from its own saving, when disaggregated by levels of government or by type of activity (general government versus government enterprise), the central government has a large surplus of



revenues over expenditures, local governments have excess expenditures, while government enterprise investment grows more rapidly than their internal generation of funds.

The drastic central-local government revenue-expenditure imbalance is clear from the data in Table 4.<sup>1</sup> More detailed data on the level of government investment and their sources of financing are provided in Table 5.<sup>2</sup> The central government engages in 40-45 per cent of total public sector investment, but finances 55-60 per cent of it.<sup>3</sup> These are net flows; gross flows are even larger since local governments finance portions of certain central government investment projects. More important, central government financing is under-estimated since certain tax receipts which actually were collected at the central level are attributed to local governments.

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1. The national income statistics are inadequate for this breakdown because they attribute to the central government much investment actually done at local levels. I calculate central government investment in the old national income statistics to be overestimated by approximately 45-50 per cent, with a corresponding underestimate of local government investment. The underestimate in the new national income statistics (for 1955-62) is about 35 per cent.

2. Percentages for investment by central government differ slightly from Table 4 because inventory investment is excluded and there are slight differences in coverage.

3. This tends to understate the flows, since central government enterprise investment is large and is financed at the central level. For general (non-enterprise) government investment, the central government does about 23 per cent and finances about 46 per cent.

Table 4

Share of Central in Total Government  
Revenues and Expenditures  
(in per cent of total)

Fiscal Year	Revenues	Expenditures	Purchase of All Goods & Services	Investment
1952	73.6	41.5	35.5	39.7
1953	71.8	42.0	36.5	34.8
1954	70.8	41.4	36.2	31.3
1955	70.2	51.9	44.9	49.3
1956	71.9	49.2	41.7	41.0
1957	71.9	50.0	41.8	40.2
1958	71.7	48.7	41.2	40.7
1959	72.0	50.6	43.0	43.2
1960	72.6	50.3	42.1	41.9
1961	73.0	50.6	42.6	42.3
1962	71.8	49.7	42.0	40.8
1963	71.6	47.8	39.5	41.2
Cumulative Average	72.0	48.6	41.0	41.1

Note: Including government enterprise saving and investment.

Source: Worksheets from forthcoming study on the public sector in postwar Japan. Expenditures (notably the investment component) are adjusted to the level of government where they actually occurred.

Table 5

Gross Fixed Investment Expenditures and its Financing  
by Level of Government  
(per cent of total)

Fiscal Year	Share	Central	Prefecture	Municipality
1958	Investment by	39.9	30.6	29.5
	Financed by	56.5	19.8	23.7
1959	Investment by	42.3	30.6	27.1
	Financed by	58.7	20.0	21.3
1960	Investment by	42.3	31.1	26.6
	Financed by	58.0	21.9	20.9
1961	Investment by	46.2	29.8	24.0
	Financed by	59.8	21.0	19.2
1962	Investment by	41.4	33.6	25.0
	Financed by	55.4	24.3	20.3
1963	Investment by	44.0	31.2	24.8
	Financed by	57.1	22.7	20.2

Note: Includes government enterprise, which is financed primarily at same level of government. Central government financing is probably underestimated.

Source: Computed from Jichisho (Ministry of Local Autonomy), plus adjustments for excluded central government ent. I.

As is implicit in Table 4 local governments finance only approximately half of their consolidated expenditures from within. Their need for external funds is great. Most come from the central government, through a complex variety of channels. In brief, they are:<sup>1</sup> automatic allotment of specified percentages of certain taxes collected at the central level;<sup>2</sup> central government grants for specified local expenditures, such as compulsory education, health facilities, and disaster relief; central government loans and purchases of local government bond issues (mainly from Trust Fund Bureau and postal annuity and life insurance funds), usually related to specific investment projects; and bond sales to and loans from the private sector and from abroad. Only a few large municipalities and prefectures have sufficiently high credit ratings to be able to issue bonds publicly.

The separation of functions -- with the central government collecting most of the taxes and the local government doing most of the purchases of goods and services (including investment) -- poses some interesting issues of efficiency. I am not aware of studies of the relative efficiency (cost, degree of evasion, etc.) of collection of different kinds of taxes at various levels of government, nor of the relative efficiency of different types of expenditures.<sup>3</sup> I hypothesize that the central government is more efficient in collection of most kinds of taxes, due to economies of scale and the advantages of having identical rates throughout the country. For expenditures

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1. Ministry of Home Affairs, The Local Finance System in Japan, n.d.. (1965)

2. 28.9 percent of personal income, corporation and liquor taxes. Allotment, while automatic to local government's as a group, is discretionary for individual local units, depending on their financial needs and local tax base.

3. I hope that participants in this conference can inform me on these points.

the picture is much less clear, depending greatly on the type of expenditure. There is perhaps a presumption of greater efficiency at the central level since it is able to attract better human resources.

Efficiency is not the sole, nor necessarily the most important criterion for evaluating central-local relationships. Clearly political and social objectives loom heavily (for example, the desired degree of decentralized governmental decision-making, or of voter identification with and participation in local politics). Whatever may have been early postwar reform objectives, the degree of actual fiscal dependence of local government on central severely circumscribes the independent power and decision-making ability at the local level.

### III

The events of the past few years -- the relative rise in government investment, the greater relative decline in private demand (as business fixed investment demand first levelled off, and then declined somewhat, as a per cent of GNP), the increased reliance by government on borrowing to pump-prime and to finance government investment, and the lowering of interest rates -- attest to the changes evolving in public-private sector relationships. While some of these represent new trends and new problems, some probably are of a temporary nature only, and certain old problems are likely to come once again to the fore. In this section I consider three policy issues: the major questions of the financing of future government investment and of interest rate policy, and the lesser issue of whether the public or private sector is entitled to the initial claim on resources generated from expansion of central bank credit. My time horizon is on the order of 5-8 years.

A basic assumption is that the share of government investment in GNP (and in gross domestic investment) will continue to rise somewhat. The lag in government social overhead investment has produced a strong pent-up demand for public provision of certain consumer services which is being reflected through the political process.<sup>1</sup> These pressures are likely to remain extremely strong for at least another five years. They will induce a considerable shift in the allocation of investment from private production of goods and services to public production. Let us examine the nature of these pressures briefly.

Demand focuses mainly on urban housing and roads, and to some extent on urban environmental sanitation (water and sewage systems). The housing shortage -- variously estimated as involving 17-33 per cent of the population -- is a legacy of World War II destruction and low priority to housing in the 1950's. While about 90 per cent of housing investment is in the private sector, approximately one-third of that is government-financed. The need is particularly great for relatively low-priced urban dwelling units, an area in which government investment has concentrated. High urban land prices, high interest rates, need for large-scale investment, and lack of private financial institution support<sup>2</sup> on the one hand, and on the other hand government experience in such large-scale projects, ability to subsidize through low interest rates and other measures, ability to obtain land through condemnation processes, and a feeling by citizen and bureaucrat that housing is a governmental responsibility --

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1. Indeed, the government plans (income doubling between 1961-1970, and medium-term for 1964-1968) and, more important, budgets have already been responsive to these problems and no doubt will continue to respond.

2. This could change fairly rapidly if alternative lending opportunities dry up and interest rates continue to decline.

all argue for a considerably greater government housing investment as well as financing program.<sup>1</sup>

The demand for investment in roads is also very strong, and will rise rapidly. It is not limited to consumers. As industries find urban land and other production costs rising, they increasingly diversify geographically. Truck transport, over even terrible roads, has accordingly grown rapidly and will continue. Most important, perhaps, is the growth of the automobile industry and reliance upon it as one of the major leading sectors for future growth of the economy. Without a substantially better road system than Japan has today, the cars to be produced will have no way of being used.

While such government social overhead investment will expand rapidly, government investment to complement private production more directly will not slow down substantially. Further improvements in the national railroads and especially in harbor facilities are needed. Regional dispersion of industry will generate new demands for government complementary investment.

The evaluation of the policy issues depends on whether it is assumed that demand in the economy is deficient relative to supply capacities, as has been true for the past 1-1/2 years, or whether aggregate demand is equal to or tends to exceed supply. In a demand deficient situation a large expansion of government spending financed by borrowing is not competitive with private sector demand for resources, so a vigorous government investment program has little social cost.

Evaluation of future policy issues has to be in light of the present (1965-1966) recession. Its immediate cause was similar to previous recessions: restrictive monetary policies were undertaken to restrict investment (and hence

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1. Economic Planning Agency, Economic Survey of Japan, 1964-1965, pp. 99-105.

aggregate) demand in order to restore balance of payments equilibrium. However, the reaction of the economy to the easing of monetary tightness, once the balance of payments crisis was over, has been substantially different from earlier recessions. Easy money since early 1965 has not set off a business fixed investment boom; the overhang of excess capacity and reduced profit margins has been too great. The government rather quickly recognized the unresponsiveness of private investment demand, and also acted rather quickly, in July 1965. However, it underestimated the amount of additional spending that was needed to attain reasonably full capacity operation. Hence, its increase in demand during 1965 only balanced decreases in private demand; most of the net growth in demand came from abroad. Preliminary evidence for the spring of 1966 indicates growing success in government compensatory fiscal measures, but output is still considerably below the full capacity level. GNP can grow rapidly without substantial new private investment until the capacity limits are reached.

Eventually, however, the very success of compensatory fiscal policy in generating aggregate demand to a full capacity level of output will once again place the Japanese economy in its postwar pattern of full demand, with the attendant financial problems of the past. At that point, any further relative increases in government investment (or consumption or transfer payments) will have to be at the expense of private demand.

#### The Financing of Government Investment

The rising share of government investment in GNP will probably be financed increasingly from external sources, both before and once a full aggregate demand economy is reached. This judgment is based on the following reasoning.



The government has the objective, though not always achieved, to limit tax revenues to 20 per cent of national income. Strong political pressures to continue the annual practice of reducing tax rates will make it difficult to raise the tax share substantially above 20 per cent. Government current expenditures are unlikely to fall much relative to GNP.<sup>1</sup> In fact, rising private wage rates and increases in the consumer price index will place pressure on the government to continue to raise government salaries, so that the government's wage bill will probably increase more rapidly than GNP. With constant revenues and current expenditures and rising investment relative to GNP, the I-S gap will widen, as indeed it already has in 1964-1965; accordingly government will rely more on borrowed funds. The government will increasingly substitute financial for fiscal means of obtaining the saving of the economy.

The government could try to increase its net foreign borrowing. Aside from the fact that at present foreign interest rates are relatively high and funds less readily available, it is false economy for a government to borrow abroad simply because the interest rate is lower than domestic market rates.<sup>2</sup> The sole justification for foreign borrowing is to increase the supply of resources available to the economy as reflected in the balance of payments -- to

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1. An only moderate expansion of Japan's defense capabilities, due to changing governmental policies as Japan's potential international power is perceived and acted upon, would increase government current expenditures substantially.

2. Foreign borrowing involves a real cost in that the interest has to be paid in exports, while domestic borrowing involves only a transfer among individuals.

pay for additional imports, to build up foreign exchange reserves, or to engage in foreign investment. This justification of course has been and will continue to be important for Japan.<sup>1</sup>

The government will rely mainly upon domestic borrowing to finance the rising I-S gap. Ceteris paribus, government borrowing directly from the central bank rather than from the private sector results in a greater increase in aggregate demand because there is no direct decline in private liquidity and spending. However, it is analytically useful to examine fiscal and monetary policies on a consolidated basis in terms of their overall effects. If the central bank has certain liquidity and expenditure targets for the private sector which it can achieve on its own after taking fiscal actions into account, then there is no difference between government borrowing from the private sector or from the Bank of Japan. For example, if the government borrows from the private sector, the Bank of Japan can replenish the liquidity drain by loans to or security purchases from private financial institutions.<sup>2</sup> On the other hand, if the government were to borrow directly from the Bank of Japan and thereby to generate excess (inflationary) aggregate demand, the Bank of Japan could reduce private sector liquidity by reducing its loans to the private sector.

1. For the periods (most of the postwar) in which aggregate demand has been strong and the balance of payments a substantial constraint upon even more rapid growth, government foreign lending under the export financing program of the Export-Import Bank of Japan has been rather expensive. It has deprived the economy of resources for domestic use or foreign exchange from direct cash sales, and has not yet been a net earner of foreign exchange (new loans each year being greater than repayments).. Supporters of this policy have not demonstrated that it sufficiently developed new markets not otherwise obtainable or generated new technologies and economies of scale in domestic production to have been worthwhile. In recession periods, such as the past 1-1/2 years, the expansion of export related loans is socially not very costly; indeed it is one good way to generate additional demand.

2. This is the present system. The Bank of Japan lends mainly to the private sector, and most of the government's borrowing is from the private sector. Apparently, the Bank of Japan has in effect underwritten the recent government bond issues by informally guaranteeing private financial institutions all the liquidity they need, through loans or security purchase.

In practice policies are unlikely to be implemented this way. Government direct borrowing from the Bank of Japan is probably relatively more expansive, especially in periods when the Bank of Japan would prefer not to have liquidity eased. The basic reason is that Bank of Japan independence from government policy is limited. Past experience with direct borrowing from the Bank of Japan by the government and government agencies indicate how powerless the Bank of Japan may be in such direct relationships. The law prohibiting direct Bank of Japan purchase of government long-term securities seems well justified.

Whatever restrictive power the Bank of Japan has is more effective against private financial institutions. Given its large portfolio of short-term loans to banks, the Bank of Japan operates from a position of considerable strength. It can take the initiative in deciding to restrict credit. Ironically it is more effective for the Bank of Japan to hold loans than government securities. The imperfections of Japan's capital market, and the political and administrative pressures of the government, restrict the Bank of Japan's freedom to engage in open market bond sales for restrictive purposes.

So long as demand is deficient it does not really matter whether the government borrows from the private sector or from the Bank of Japan. In either case Bank of Japan policy supports high liquidity in the private sector. The problem arises once sufficient demand has been generated through fiscal policy, and yet the government needs additional financing to cover a portion of the I-S gap.<sup>1</sup> At that point government investment becomes competitive with private spending. To prevent inflation, any borrowing to finance government investment must be offset by reductions in private liquidity to contract private spending by an amount equal to the government investment. As argued above,

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1. This presupposes that government investment demand will not be fully satisfied by the amount of expenditure provided for by compensatory finance. There is no particular reason to believe that the I-S gap will always be just filled by the amount of deficit financing (borrowing) needed to obtain full employment of resources. This might be the case for a short period, but not once private demand again grows fairly rapidly.

government borrowing from the private sector, without support by the Bank of Japan, most nearly achieves this. This is the most efficient way -- aside from taxation -- to finance the desired shift of resources to the government from the private sector without generating inflation. However, since lending within the private sector is mainly to finance investment, government borrowing only transfers saving, while government internal financing from taxation of private consumption (through personal income or indirect taxes) increases the economy's aggregate saving rate.<sup>1</sup>

#### Initial Claim on Bank of Japan Credit

The question of whether the government should borrow from the private sector or from the Bank of Japan raises a long-run (non-Keynesian) issue as to whether the government or the private sector is entitled to the initial claim<sup>2</sup> on resources equal to the amount of expansion of Bank of Japan credit.<sup>3</sup> The Bank of Japan cumulative credit increase between 1954-1964 was 7.2 per cent of the increase in GNP, a note inconsequential claim on resources.

Of this, the government received 36 per cent, but almost all in 1964. Central bank credit has gone mainly to private financial institutions. By rediscounting rather than lending to the government, the Bank of Japan has delegated

1. This does not apply to taxes on corporate profits, since the corporate sector has a much higher marginal propensity to save than the government, while the household propensity is somewhat lower.

2. There is, in addition, a secondary claim on resources which occurs when private financial institutions increase loans and deposits by the multiple of the initial expansion of "high-powered" money. This I assume is done by the private financial system.

3. This issue has been raised in certain underdeveloped countries such as India, where it is argued that the claim on resources represented by an increase in currency in circulation (which is one form of financial asset in which the private sector puts its saving) should go to the government as non-inflationary borrowing from the central bank.

the resource allocation function to the commercial banks rather than to the government. This, however, has been mitigated by the private sector lending to the government. Indeed, it is misleading to say that the Bank of Japan has not allocated its credit to the government; it has, but by the indirect process of loans to the private sector and of private sector loans to the government. If these transactions had been carried out in competitive market place one could argue that the linkage was rather weak, since the private sector was free to choose between private and public debt. But in fact the new issues of local government and public corporation bonds -- the major form of government borrowing through the marketplace -- have been forced upon private financial institutions at uncompetitive terms by government administrative suasion. An implicit arrangement seems to have been that any funds financial institutions used for such purposes would be more or less replenished, if indirectly, by Bank of Japan loans.

This suggests that the issue as to whether government or private sector receives the initial claim on resources by Bank of Japan credit expansion can be misleading and is perhaps inconsequential. It is misleading if measurement is on the basis solely of the direct flow of credit. It is inconsequential if the decision on the public-private decision on the allocation of resources has already been made and implemented by other fiscal and financial measures. However, fiscal-monetary policy decision-making is not so well articulated and coordinated in Japan that Bank of Japan allocations have no effect.

#### Interest Rate Policy

The prospect of future government investment being financed increasingly by borrowing has major implications for policies concerning the level and term structure of interest rates. The current levels of short-term and long-term

interests rates are atypical of the postwar period in that many rates on loans and bonds are close to or at equilibrium levels.

Almost all interest rates have been kept abnormally low throughout the postwar period by a combination of legal and administrative restraints by the Ministry of Finance and the Bank of Japan.<sup>1</sup> Official short-term rates have fluctuated slightly over the course of the cycle, but yields on all new bond issues have remained virtually unchanged at artificially low levels for a decade regardless of changes in demand and supply. Evidence on the degree of tightness of funds and on market levels of interest rates is provided by the actual call market rates and the effective yields on transactions in bonds sold by the Japan Telephone & Telegraph Company (den-den sai) to new users of telephone services. The call rate has been subject to wide fluctuation (4.75 - 21.90 per cent for unconditional loans); the data on average call rates are poor, especially for the period June 1957 - 1962 the Bank of Japan applied official ceiling rates which were not fully observed.<sup>2</sup> For only brief periods of very easy money has the call rate been below official long-term interest rates. (Even bank average effective short-term lending rates have tended to be above the long-term bond rates). The den-den yields ranged between 7.5 - 15.0 per cent for the period 1958-1965. While the market is narrow, the den-den rates probably reflect rather well the level of long-term rates and their changes.

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1. For greater detail, see Hugh T. Patrick, "Interest Rates and the Grey Financial Market in Japan", Pacific Affairs, Winter 1965-66.

2. The call rate does not correlate well with the Bank of Japan discount rate; see Hannan Ezekiel, "The Call Money Market in Japan", IMF Staff Papers, Vol. 13, No. 1 (March 1966). However, Ezekiel uses official statistics rather than actual call rates. Regressions which I estimated relating the call rate to growth of GNP (quarterly change over same quarter of the previous year) also showed little correlation; while estimates of actual call rates were used, they were probably not very accurate.

Only when easy money policies have been pursued (notably in recessions) have short-term rates gone substantially below officially-determined long-term rates. The disastrous easy money policy of 1963 to reduce short-term interest rates sufficiently below long-term rates to establish a market equilibrium term structure should serve as warning to those who anticipate that a market-determined level and structure of rates is always consistent with a low interest rate policy. The money supply increased 17 per cent (seasonally adjusted<sup>1</sup>) in the first half of 1963 and 27 per cent for the year. This creation of money did bring the call rate down from a 1962 tight money peak of about 14 per cent to a 1963 low of 7.3 per cent and the den-den rate from 14.016 per cent to 8.440 per cent (still well above official rates). It also generated high corporate liquidity, a new round of expenditures, and an abortive boom leading to renewed balance of payments problems. Of course call and den-den rates once again rose as the boom developed.

The present situation is different from 1963 in that private demand for funds and for investment is relatively slack while monetary policy is and can be easy, so that equilibrium as well as official interest rates have declined to postwar lows, so that a market level and structure of rates is being approximated. This offers the policy-makers a real opportunity to establish viable and strong capital and money markets by ending the restrictions on interest rates and market transactions.<sup>2</sup>

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1. Adjusted also for the surfacing of hidden loans (fukimi kashidashi) and hidden deposits.

2. The arguments concerning the resource allocation and welfare benefits of reliance on markets and prices (interest rates) for fund allocation in place of controls are well-known and are not repeated here.

The sale to the private sector of central government bonds in early 1966 for the first time since 1947, and at a yield (6.795 per cent) attractive in relatively liquid financial markets, provides a good vehicle for establishing real issue and secondary markets in debentures. Apparently individual purchasers have been guaranteed a high degree of liquidity for their bonds. This implies either an active market for government bonds or some form of underwriting ultimately, I suspect, by the Bank of Japan. The decision to sell government bonds had to overcome a large psychological block in Japan, since it ended the fiction that the government maintains a balanced budget and does not borrow on more than a seasonal basis.<sup>1</sup> Some fear lingers that government bond issue must lead to inflation -- a simplistic and misleading view.<sup>2</sup>

If government bonds lead the way to a relatively free market in all kinds of financial assets, considerable adjustments among rates will take place both in the short-run and long-run. In the short-run, the most important adjustment could be between government bonds and financial institution savings and time deposit rates. If bonds are highly liquid and maintain their present

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1. As we have seen (Table 3) this is a fiction because the government has been a net borrower almost every year. However, the borrowing was in a sense disguised (postal saving, local governments, public corporations); it was, and is, possible to maintain a surplus in the general account with overall central government deficits, since it covers only a part of central government expenditures.

2. However, it may not be unreasonable to think that once the government begins government bond-financed deficit spending it will not stop even when aggregate demand is sufficient. On the other hand, restriction of government bond issue does not guarantee that fiscal policy will result in price stability. For example, if private demand were relatively strong, the government could readily generate inflationary pressures (as perhaps in 1963 and 1964) without government bond issues by financing a widening I-S gap through increased local government and public corporation bond issue, and use of government financial institutions to finance government rather than private investment.



yield considerably above deposit rates, individuals will be induced to switch from deposits to bonds.<sup>1</sup> Substantial switching would put competitive pressure on banks to raise deposit rates. This would be healthy; depositers now subsidize big business borrowers. An increase in bank deposit rates in turn would generate pressure to raise postal savings deposits rates.<sup>2</sup>

The longer-run effects of a market-determined level and structure of interest rates have far greater implications. It is useful to distinguish between two phases: the present with inadequate aggregate demand, and that period in the future when successful fiscal policy restores the economy to the high aggregate demand condition prevalent throughout the postwar period.<sup>3</sup> As deficit spending progresses, the economy will move continuously from the first into the second phase.

The first phase, until its later stages, will not pose serious interest rate problems. Rates will rise only slightly above present levels, since

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1. Much of course depends on expectations concerning bond prices. I would not be surprised to see develop a de facto floor price, as apparently exists at present, being supported directly by the monetary authorities or indirectly by forcing financial institutions to support the market by purchases.

2. The government can justify postal savings rates somewhat below government bond yields on grounds of convenience and divisibility.

3. While pump-priming may be needed for a year or two because of a show-down in business investment, I anticipate a new round of expanded business investment thereafter, in substantial part due to the very success of fiscal policy. Of course the increase in private demand does not have to come from business investment; the only necessary condition is that it come from somewhere in the private sector. I assume that, while bothered by continued rises in consumer prices, the government will still place sufficient emphasis on full use of resources and growth to take the fiscal actions necessary to generate a fairly high level of demand (though perhaps below that of the 1961-1964 level). Finance Minister PaKuda feels a 7-8 per cent growth rate is feasible, and that deficit financing will have to continue vigorously for three years before slacking off. See "Sato Government's Fiscal Policy--PaKuda-Higo Forum on Fiscal Problems," Oriental Economist, April 1966.

the Bank of Japan will continue to support compensatory fiscal policy with easy money policy. However, as the rise in demand moves the economy into the second phase, financial markets will begin to tighten and market-determined interest rates will begin to rise.<sup>1</sup>

In the second phase -- when the Japanese economy is once again in a boom, with demand pressing against supply capacities -- government spending (investment) will once again be competitive with private spending. Fiscal-monetary policy will have to end its ease to forestall the emergence of inflationary and balance of payment problems. With financial markets accordingly tight, interest rates will rise substantially. Because few financial markets have been free, past experience provides little information as to how high market-determined short-term and long-term interest rates would rise. The call and den-den rates are indicators, but their markets are narrow, so that they probably exaggerate the magnitude of changes. Call rate data are poor and do not correlate well with other variables.

Den-den rates (D), lagged six months, regressed on the rate of growth of GNP over the same quarter for the previous year provide the following results.

$$D = 7.77 + 0.1727 \text{ GNP}_{-2} \quad R^2 = .296$$

(0.0504)

$$d = 1.6625$$

1. This tightening may come sooner than anticipated. Apparently there was some difficulty in selling the individuals' allotment for April 1966; securities firms are repurchasing individuals' bonds at a slight discount below issue price, with the effective yield increasing to 6.87 per cent.

2. Fitted only to the upswing phase the results are:

$$D = 7.37 + 0.1616 \text{ GNP}_{-2} \quad R^2 = .517$$

(0.0391)                      d = 0.6932

While providing greater explanation, the Durbin-Watson statistic indicates an autocorrelation problem.

In other words a 10 percentage point increase in the quarterly growth rate would increase the den-den rate by 1.73 percentage points. Quarterly growth rates vary much more widely than annual rates, ranging between -7.3 and 26.1 per cent. Whatever evidence we have does suggest a considerable rise in market-equilibrium interest rates in a boom from present levels.

The important question is how will the government respond to an increase in the general level of interest rates, and in particular to the price decline of outstanding government bonds and the higher requisite yield for new government bond issues. Will the government allow the market forces to work themselves out in higher interest rates? Or will the government restore controls over interest rates (especially long-term rates), set rates low relative to their equilibrium level, try to halt trading in bonds, and once again emasculate the nascent capital market? What alternative paths are open to the government?

One alternative would be to have the Bank of Japan support the bond market by direct or indirect purchases (loans to financial institutions on condition they support the bond market). This would clearly be inflationary, and eventually self-defeating. I regard it unlikely as a major action, though interim support may occur.

A second would be for the government to have a more restrictive fiscal policy by increasing the share of taxes in GNP or, more politically likely, by reducing government expenditures, notably investment. This would both apply the necessary restriction to demand and reduce the government's need to borrow. But much depends on the size of the I-S gap and the government decision as to whether its investment program should be carried through.

It is very likely that a full demand condition will be restored before the government has built sufficient houses, roads, waterworks, harbors, etc. The government may be unwilling to restrict its investment program (reduce the government's share of total resources) sufficiently for purposes of compensatory finance.

A third alternative is for the government to continue its investment program, and to finance the I-S gap by competing with private borrowers in the private sector market for funds. It would, in effect, bid away resources from private users. This, plus appropriately restrictive monetary policy, would offset the increases in demand generated by the government investment expenditure. It would have the advantage of allowing money and capital markets to flourish and of interest rates to carry out their proper allocative functions.

One argument against allowing the level of interest rates to rise is that it would place a higher interest rate burden on the government. This is a false argument, for a variety of reasons. Indeed, for any given amount of liquidity in the private sector as determined by central bank policy, at the margin government borrowing is at zero net cost to the government whether from the private sector or from the Bank of Japan, whether at the high interest rates or low. The reason is that increased profits of the Bank of Japan from increased interest receipts are transferred to the government. Any amount of government borrowing from the private sector has to be matched by equivalent Bank of Japan loans to the private sector, if the given level of private sector liquidity is to be maintained. I assume that the government borrow-rate from the private sector is at essentially the same level as the Bank of Japan rediscount rate, so that what it pays out as interest it receives as

Bank of Japan profits.<sup>1</sup> If the government were to borrow directly from the Bank of Japan and thereby through its expenditures generate excess private demand, the Bank of Japan would have to reduce its loans to the private sector by an equivalent amount.

This indeed is a fourth possibility. Fiscal policy under this circumstance would continue to be expansive. The system would rely even more upon the Bank of Japan than it has in the past fifteen years to reduce credit to the private sector by tight money measures sufficiently to absorb the government-generated excess demand. The Bank of Japan is unlikely to accomplish such a policy adequately. The result would be inflation. Probably the laws restricting government direct borrowing from the Bank of Japan will not be changed, in which case this really is not an alternative.

The government would not be happy with a price decline substantially below par in its already issued bonds, and would be reluctant to see its interest cost of funds much raised. The government arguments appear to be founded on bookkeeping, legalistic, and status, pride, or other psychological criteria rather than on economic reasoning. Thus, the final alternative is that the government will restore interest rate ceilings and other controls in order to keep interest rates below equilibrium levels. In other words, the government will revert to the control system used throughout the postwar period. Credit rationing and administrative guidance would once again force private financial institutions (and to some extent indirectly the Bank of Japan) to finance the government's borrowing at artificially low interest rates. For reasons of prestige, the government might well discontinue financing the I-S

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1. If the government bond rate were below the central bank lending rate the government would actually make a small net profit.

gap with government bond issues, but instead issue local government and public corporation bonds and, by shifting flows through government financial intermediaries to finance government investment, divert postal savings and life insurance more into government investment. While this too will sop up private funds, reliance will also have to be placed upon Bank of Japan restrictive credit policies. If this alternative were selected, the nascent capital market would once again wither away, and the efficacy of interest rates in the allocation process would be reduced.

Which among these alternatives will the government choose when the success of present fiscal policy restores growth, and market-determined interest rates rise? My prediction is that while the government will make marginal adjustments among the first four alternatives to reduce the aggregate demand pressure, its main adjustment will be to restore administrative controls over financial markets and ceilings on interest rates. The attempt to establish a real long-term capital market and a market-determined structure of interest rates will be aborted. Perhaps the most interesting question is how high -- 7 per cent?, 7-1/2 per cent? -- will the government allow the market yield on government bonds to rise before it clamps on controls once again.